REMARKS

Double Patenting

Claims 11-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Ko et al (U.S. Patent No. 6,305,978).

In regard to claim 11, an electrical connector assembly disclosed therein comprises an elongated insulative housing defining a base portion extending along a longitudinal direction thereof with a plurality of passageways therein, a plurality of signal and grounding contacts disposed in the corresponding passageways, respectively, a plurality of cables including inner conductors, a grounding bar including a main portion extending along said longitudinal direction with a plurality of grounding fingers extending therefrom and a metallic shielding enclosing said housing. The inner conductors of the cables mechanically and electrically engage with the corresponding signal contacts. **The grounding fingers mechanically and electrically engage with the corresponding grounding contacts**. The metallic shielding is formed with a plurality of resilient tabs mechanically and electrically engaged with the grounding bar.

Referring to claim 1 in conjunction with FIG. 1 of Ko et al, a cable connector comprises a contact set 10, a cable set 20, a grounding plate 30 and an insulative housing 40 having a panel defining at least one cutout therein and two opposite lateral bars, said housing fixedly accommodating the contact set, the cable set and the grounding plate therein. The contact set 10 has a dielectric insert 11 and a plurality of conductive contacts 12 fixedly received in the insert. Each contact 12 has a contact portion 122 extending beyond the insert and a tail portion fixedly

received in the insert. The cable set 20 has a plurality of coaxial cables 22 and a conductive grounding bar 21 retaining the cables. Each coaxial cable 22 has a conductive core electrically contacting with the tail portion of the contact 12, a metal braid and a dielectric layer between the conductive core. The metal braid is **electrically engaged with the grounding bar.** The grounding plate 30 has a plurality of grounding fingers 32 and at least one grounding beam 33 electrically contacting the grounding bar 21 of the cable set 20.

Claim 1 of Ko et al. **does not** define the relationship between the grounding fingers 32 of the grounding plate 30 and the contact 12, but it is specifically shown in FIG. 4 of Ko et al. that the grounding fingers 32 of the grounding plate 30 is parallel to and **insulated from** each contact 12 for shielding purpose. However, claim 11 of the present invention specifically defines the limitation of "**the grounding fingers of the grounding bar mechanically and electrically engaged with the corresponding grounding contacts**". Therefore, the grounding plate 30 defined in claim 1 of Ko et al. is distinct from the grounding bar defined in claim 11 of the present invention.

The conductive grounding bar 21 defined in claim 1 of Ko et al. **does not** have "the grounding fingers mechanically and electrically engaged with the corresponding contacts", but directly engages with the metal braid of the coaxial cable 22. However, claim 11 of the present invention specifically defines the limitation of "**the grounding bar having a plurality of grounding fingers mechanically and electrically engaged with the corresponding grounding contacts**". Therefore, the grounding bar 21 defined in claim 1 of Ko et al. is also distinct from the grounding bar defined in claim 11 of the present invention.

As described above, claim 1 of Ko et al. fails to disclose the limitation of "**the**

grounding bar having a plurality of grounding fingers mechanically and electrically engaged with the corresponding grounding contacts" disclosed in claim 11 of the present invention.

Furthermore, by the grounding fingers of the grounding bar mechanically and electrically engaged with the corresponding grounding contacts and the resilient tabs of the metallic shielding mechanically and electrically engaged with the grounding bar, an integrated grounding path is established for ensuring a high-speed signal transmission.

Therefore, claim 11 is patentable over claim 1 of Ko et al.

Claims 12-13 are patentable over claim 1 of Ko et al. since they depend from independent claim 11.

Claim Rejections under 35 U.S.C. 102

Claims 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ko et al.

In regard to amended claim 8, a method for making an electrical connector assembly comprising:

providing an elongate insulative housing having a base portion and a plurality of passageways defined in the base portion;

providing an insulative insert having a plurality of channels;

providing a plurality of signal and grounding contacts each having a connecting section retained in the channel, a mating section extending beyond the insulative insert and **a step section between the mating section and the connecting section** and rendering the mating section higher than the connecting section;

providing a plurality of cables each having a conductor placed into the channel and connecting with the connecting section of the contact;

placing a plurality of solders into the channels;

heating the mating sections of the contacts so that the solders are melted and solder the connecting sections and the conductors together; and

assembling the insulative insert to the housing with the mating sections received into the passageways.

Referring to FIGS. 1 and 10 of Ko et al, it is clear that the contact 12 disclosed therein **does not** have a step section between a mating section 122 thereof and a connecting section thereof and rendering the mating section higher than the connecting section.

Therefore, claim 8 is not anticipated by Ko et al.

Claim 9 depending from claim 8 further recites that the connector assembly further comprises a grounding bar assembled to the insulative insert and having a plurality of **grounding fingers soldered to the connecting sections of the contacts.**

However, Ko et al. fails to disclose the limitation of **"the grounding bar having a plurality of grounding fingers soldered to the connecting sections of the contacts"** disclosed in claim 1 of the present invention. Detail explanation please refers to the response to double patenting rejection in forgoing paragraph.

Therefore, claim 9 is not anticipated by Ko et al.

Dependent claim 10 is not anticipated by Ko et al. since it depends from independent claim 8.

In regard to claim 11, an electrical connector assembly disclosed therein

comprises an elongated insulative housing defining a base portion extending along a longitudinal direction thereof with a plurality of passageways therein, a plurality of signal and grounding contacts disposed in the corresponding passageways, respectively, a plurality of cables including inner conductors, a grounding bar including a main portion extending along said longitudinal direction with a plurality of grounding fingers extending therefrom and a metallic shielding enclosing said housing. The inner conductors of the cables mechanically and electrically engage with the corresponding signal contacts. **The grounding fingers mechanically and electrically engage with the corresponding grounding contacts**. The metallic shielding is formed with a plurality of resilient tabs mechanically and electrically engaged with the grounding bar.

Referring to FIG. 1 of Ko et al, an electrical connector assembly 100 disclosed therein comprises an elongated insulative housing 40 defining a base portion extending along a longitudinal direction thereof with a plurality of passageways therein, a plurality of contacts 12 disposed in the corresponding passageways, respectively, a plurality of cables 22 including inner conductors, a grounding bar 30 including a main portion 31 extending along said longitudinal direction with a plurality of grounding fingers 32 extending therefrom and a metallic shielding 50 enclosing said housing. The inner conductors 221 of the cables 22 mechanically and electrically engage with the corresponding contacts 12.

However, the grounding fingers 32 of the grounding bar 30 disclosed in Ko et al. is parallel to and **insulated from** the contact 12 for shielding purpose, as best shown in FIG. 4. The conductive grounding bar 21 disclosed in Ko et al. **does not** have "the grounding fingers mechanically and electrically engaged with the corresponding contacts", but directly engages with the metal braid of the coaxial

cable 22. Thus, Ko et al. fails to disclose the limitation of "**the grounding bar having a plurality of grounding fingers mechanically and electrically engaged with the corresponding grounding contacts**" disclosed in claim 1 of the present invention.

Therefore, claim 11 is not anticipated by Ko et al.

Dependent claims 12-13 are not anticipated by Ko et al. since they depend from independent claim 11.

Claim Rejections under 35 U.S.C. 103(a)

Claims 1, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. in view of McGaffigan et al.

In regard to claim 1, an electrical connector assembly defined therein comprises an elongate insulative housing having a base portion, a plurality of passageways defined in the base portion and an insulative insert in a rear end thereof, a plurality of signal and grounding contacts, a grounding bar assembled in the insert and a plurality of cables extending into the insulative insert. Each contact comprises a mating section extending beyond the insulative insert and received into a corresponding passageway of the housing, a connecting section remained in the insert, and **a step section between the mating section and the connecting section and rendering the mating section higher than the connecting section.** The grounding bar has a plurality of **grounding fingers electrically connecting with corresponding grounding contacts.** The cables are electrically soldered to the connecting sections.

Referring to FIG. 1 of Ko et al, an electrical connector assembly 100

disclosed therein comprises an elongate insulative housing having a base portion 40, a plurality of passageways defined in the base portion and an insulative insert 11 in a rear end thereof, a plurality of contacts 12, a grounding bar 30 assembled in the insulative insert 11 and a plurality of cables 22 extending into the insulative insert 11. Each contact 12 comprises a mating section 122 extending beyond the insulative insert and received into a corresponding passageway of the housing, a connecting section 121 remained in the insert. The grounding plate 30 has a plurality of grounding fingers 32. The cables 22 are electrically soldered to the connecting sections 121.

However, the grounding fingers 32 of the grounding plate 30 disclosed in Ko et al. is parallel to and insulated from each contact 12 for shielding purpose. The conductive grounding bar 21 disclosed in Ko et al. **does not** have "the grounding fingers mechanically and electrically engaged with the corresponding contacts", but directly engages with the metal braid of the coaxial cable 22. Therefore, Ko et al. fails to disclose the limitation of "**the grounding bar having a plurality of grounding fingers of the grounding bar electrically engaged with the corresponding grounding contacts**" disclosed in claim 1 of the present invention. Furthermore, by the grounding fingers of the grounding bar mechanically and electrically engaged with the corresponding grounding contacts, an grounding path is established in grounding contacts for ensuring a high-speed signal transmission.

Referring to FIG. 1 of McGaffigan et al, a multipin connector 2 disclosed therein has a block of insulating material 4 and a plurality of terminal 8 extending through the block 4. It is clear that McGaffigan et al does not disclose the limitation of "**the grounding fingers of the grounding bar electrically engaged**

with the corresponding grounding contacts" disclosed in claim 1 of the present invention, either.

Therefore, claim 1 is patentable over Ko et al. in view of McGaffigan et al.

Additionally, the contact 12 disclosed in Ko et al. have not **a step section** between the mating section 122 and the connecting section 121 and rendering the mating section higher than the connecting section, as best shown in FIG. 4 of Ko et al.

Referring to column 4, lines 21-25 and lines 28-33 of the specification in conjunction with FIG. 1 of McGaffigan et al, a multipin connector 2 disclosed therein has a block of insulating material 4 and a plurality of terminal 8 extending through the block 4. The terminal 8 comprises a mating section (not label) exposed out of one side of the block 4, a retaining section (not label) disposed in the block 4 and a projection 10 of the block 4, and a downwardly depending region 9 extending outwardly from the projection 10 of the block 4 and terminating in an arcuate region 12 adapted to receive a wire 20 to be soldered thereto.

Because the block 4 and the projection 10 are provided between the mating section and the arcuate region 12, during soldering the wire 20 to the arcuate region 12, the problem that the molten solder flows to the mating section (not label) will never occur. Therefore, the depending region 9 provided at the terminal 8 is configured **not to** prevent molten solder from wetting the mating section. In fact, the depending region 9 provided at the terminal 8 is configured only in order to arrange the wire 20 to be coaxial with the projection 10 of the body 4 for simplifying assembly of the heat shrinkable coaxial sleeve 22 which surrounds the projection 10 of the body 4 and the wire 20. Thus, a person having ordinary skill in

the art at the time the invention was made have **no motivate** to provide Ko et al. contacts step section as taught by McGaffigan to prevent molten solder from wetting the mating portion.

Therefore, claim 1 is patentable over Ko et al. in view of McGaffigan et al.

Dependent claims 5-7 are patentable over Ko et al. in view of McGaffigan et al. since they depend from independent claim 1.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. in view of McGaffigan et al. applied to claim 1 above, and further in view of Beaman et al.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. in view of McGaffigan et al. applied to claim 1 above, and further in view of Tan et al.

Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. in view of McGaffigan et al. applied to claim 1 above, and further in view of Jones.

Each of Beaman et al, Tan et al and Jones **does not** disclose the limitation "the contact comprising **a step section between the mating section and the connecting section**" and "**the grounding bar having a plurality of grounding fingers electrically connecting with corresponding grounding contacts**" disclosed in claim 1. Therefore, claim 1 is patentable over Ko et al. in view of McGaffigan et al and each one of Beaman et al, Tan et al and Jones.

Therefore, Claim 2 is patentable over Ko et al. in view of McGaffigan et al. and Beaman et al. since it depends from independent claim 1.

Claims 3-4 are patentable over Ko et al. in view of McGaffigan et al. and Tan

et al. since they depend from independent claim 1.

Claim 3-4 are patentable over Ko et al. in view of McGaffigan et al. and Jones. since they depend from independent claim 1.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,

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